Patent claims

1. Prodrug compounds of inhibitors of dipeptidyl peptidase IV (DP IV), which prodrug compounds have the general formula A-B-C, wherein

A is an amino acid,
B is a chemical bond between A and C or is an amino acid, and
C is a stable inhibitor of DP IV.

2. Prodrug compounds according to claim 1, characterised in that B is proline, hydroxyproline, thiazolidinecarboxylic acid, dehydroproline, pipecolic acid, azetidinecarboxylic acid or aziridinecarboxylic acid.

3. Prodrug compounds according to claim 1 or 2, characterised in that B is proline or hydroxyproline.

4. Prodrug compounds according to one of the preceding claims, characterised in that C is an aminoacylpyrrolidide, aminoacylthiazolidide or N-dipeptidyl, O-acyl hydroxylamine.

5. Prodrug compounds according to one of the preceding claims, characterised in that the inhibitors are present in salt form.

6. Prodrug compounds according to one of the preceding claims, characterised in that A-B is a dipeptide of formula Ile-Pro or Gly-Pro.

(Chapter II)

Patent claims

1. Prodrug compounds of inhibitors of dipeptidyl peptidase IV (DP IV), which prodrug compounds have the general formula A-B-C, wherein

A is an amino acid,
B is a chemical bond between A and C or is an amino acid,
and
C is a stable inhibitor of DP IV without C-terminal phosphonate residue.

2. Prodrug compounds according to claim 1, characterised in that B is proline, hydroxyproline, thiazolidinecarboxylic acid, dehydroproline, pipecolic acid, azetidinecarboxylic acid or aziridinecarboxylic acid.

3. Prodrug compounds according to claim 1 or 2, characterised in that B is proline or hydroxyproline.

4. Prodrug compounds according to one of the preceding claims, characterised in that C is an aminoacylpyrrolidine, aminoacylthiazolidine or N-dipeptidyl, O-acyl hydroxylamine.

5. Prodrug compounds according to one of the preceding claims, characterised in that the inhibitors are present in salt form.

6. Prodrug compounds according to one of the preceding claims, characterised in that A-B is a dipeptide of formula Ile-Pro or Gly-Pro.

7. Pharmaceutical composition, especially for oral administration, characterised in that it comprises at least one prodrug compound according to one of the preceding claims optionally in combination with customary carriers or excipients.

8. Use of prodrug compounds or pharmaceutical compositions according to one of the preceding claims in the preparation of a medicament for the temporally controlled *in vivo* inhibition of DP IV.

9. Use of prodrug compounds or pharmaceutical compositions according to one of claims 1 to 6 in cell-, tissue- or organ-specific inhibition of DP IV.

10. Use of prodrug compounds or pharmaceutical compositions according to one of claims 1 to 6 in the treatment of disorders in mammals that can be treated by modulating the DP IV activity of a mammal.

11. Use according to claim 9 in the treatment of metabolic disorders in humans.

12. Use according to claim 9 in the treatment of impaired glucose tolerance, glucosuria, hyperlipidaemia, metabolic acidoses, diabetes mellitus, diabetic neuropathy and nephropathy and of sequelae of diabetes mellitus in mammals.